

IN THE CLAIMS

1. An absorbent article, comprising a unitary system of microlayered film constructed and arranged for performing the multiple functions of such absorbent article, said system comprising;

5 at least one first microlayer film region having a liquid intake function,

 at least one second microlayer film region having a liquid uptake and distribution function,

 at least one third microlayer film region having a
10 liquid retention function, and

 at least one fourth microlayer film region having a liquid barrier function.

2. The absorbent article of claim 1, in which at least two of said first, second, third and fourth microlayer film regions are coextruded and assembled with the other of said film regions to form the unitary
5 microlayered film system.

3. The absorbent article of claim 2, in which said first and second microlayer film regions are coextruded to form a first multilayered film subsystem unit.

4. The absorbent article of claim 2, in which said third and fourth microlayer film regions are coextruded to form a second subsystem unit.

5. The absorbent article of claim 2, in which all of said first, second, third and fourth microlayer film regions are coextruded to form the unitary microlayered film system.

6. The absorbent article of claim 2, in which at least one of said second or third microlayer film regions is coextruded with at least one of said first or fourth microlayer film regions.

7. The absorbent article of claim 1 wherein said first microlayer film region comprises a bodyside liner having an open area from about 30% to about 90% of the bodyside liner, said second microlayer film region has a
5 density from about 0.015g/cc to about 0.05 g/cc, said third microlayer film region has an absorbent capacity of at least about 10 grams of saline per gram of microlayer film in the region, and said fourth microlayer film region comprises a liquid barrier outer cover sheet.

8. The absorbent article of claim 1, in which said microlayer film regions each comprise at least two microlayers forming a laminate.

9. The absorbent article of claim 8, in which the laminate comprises a thermoplastic melt extendable elastomer microlayer and a melt extendable non-elastic polymer microlayer.

10. The absorbent article of claim 9 wherein the laminate includes a multiplicity of alternating elastomer and non-elastic polymer microlayers.

11. The absorbent article of claim 10, in which the laminate is constructed and arranged to be stretched after coextrusion to form multiple film corrugations.

12. The absorbent article of claim 11 wherein at least two of said microlayer film regions have microchannels therein.

13. The absorbent article of claim 12, in which at least the second and third microlayer film regions have microchannels therein.

14. An absorbent article as set forth in claim 13 wherein the first microlayer film region is substantially free of microchannels.

15. An absorbent article as set forth in claim 14 wherein the fourth microlayer film region is substantially free of microchannels.

16. The absorbent article of claim 13 wherein the microchannels in the third microlayer film region have a smaller mean size than microchannels in the second film region.

17. The absorbent article of claim 13 wherein the microchannels in the third microlayer film region have a smaller mean size than any microchannels in the first, second and fourth microlayer film regions.

18. The absorbent article of claim 10, in which said third microlayer film region further includes a superabsorbent.

19. The absorbent article of claim 18, in which said one elastomer microlayer and said one non-elastic polymer microlayer and said superabsorbent are coextruded together.

20. The absorbent article of claim 1 wherein the absorbent article is a personal care product.

21. The absorbent article as set forth in claim 20 wherein the personal care product is one of a diaper, an adult incontinence product, a training pant, a feminine hygiene product and a wound dressing.

22. An absorbent article comprising a liquid intake region, a liquid uptake and distribution region, a liquid retention region and a barrier region, at least the liquid retention region comprising a microlayer film.

23. An absorbent article as set forth in claim 22 wherein the retention region is formed entirely of microlayer film.

24. An absorbent article as set forth in claim 23 wherein at least one other of said regions is formed of microlayer film.

25. An absorbent article as set forth in claim 22 wherein at least one of the regions is free of microlayer film.

26. An absorbent article comprising a liquid intake region, a liquid retention region, a barrier region, and plural strips of microlayer material located adjacent to the liquid retention region.

27. An absorbent article as set forth in claim 26 wherein the strips are spaced apart from each other in a lateral direction of the absorbent article.

28. An absorbent article as set forth in claim 26 wherein the strips have a density from about 0.015 g/cc to about 0.05 g/cc and are located adjacent to the barrier region.

29. An absorbent article as set forth in claim 26 further comprising a liquid uptake and distribution region located generally between the liquid intake region and the liquid retention region.

30. An absorbent article as set forth in claim 29 wherein the strips of microlayer material are located generally between the retention region and the barrier region.

31. An absorbent article as set forth in claim 30 wherein the barrier region comprises a core of superabsorbent material and cellulose fibers.

32. A method of making an absorbent article, the method comprising:

forming a first microlayer film including multiple microlayers;

5 forming a second microlayer film including multiple microlayers;

forming a third microlayer film including multiple microlayers;

10 forming a fourth microlayer film including multiple microlayers;

activating the first microlayer film to form an intake function region;

activating the second microlayer film to form an uptake and distribution function region;

15 activating the third microlayer film to form a retention function region;

activating the fourth microlayer film to form a barrier function region; and

20 assembling the first, second, third and fourth microlayer films to form the absorbent article.

33. A method as set forth in claim 32 wherein said step of assembling the microlayer films occurs after said steps of activating the microlayer films to form said regions.

34. A method as set forth in claim 32 wherein said step of assembling the microlayer films occurs before said steps of activating the microlayer films to form said regions.

35. A method as set forth in claim 34 further comprising, subsequent to said step of assembling the microlayer films and prior to said steps of activating the microlayer films of processing the assembled microlayer
5 films into an absorbent garment capable of being worn to absorb liquids from the body.

36. A method as set forth in claim 32 wherein each of said activating the microlayer film steps comprises one of stretching, heating and microwave irradiation of the microlayer film.

37. A method as set forth in claim 32 wherein each of said forming steps comprises coextruding microlayers forming the microlayer film.

38. A method as set forth in claim 37 wherein at least two of said forming steps are carried out by coextrusion of the microlayers to form a single microlayer film unit including at least two of said first through
5 fourth microlayer films.

39. A method as set forth in claim 38 wherein the all of said forming steps are carried out by coextrusion of the microlayers to form a single microlayer film including all of said first through fourth microlayer films.